**DOCKET NO.: ISIS-5318** 

APR 2 6 2004

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

David J. Ecker, et al.

Confirmation No.: 5964

**Application No.: 10/700,939** 

Group Art Unit: 1645

Filing Date: November 4, 2003

Examiner: Not Yet Assigned

For: STRUCTURAL MOTIFS AND OLIGOMERIC COMPOUNDS AND THEIR

**USE IN GENE MODULATION** 

DATE OF DEPOSIT: Ope

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA,

TYPED NAME: Elizabeth A. McLoud

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

# SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

the above identified application as set forth in § 1.491, before the mailing date				
of a first Office Ac	tion on the merits of the above-identified application, or			
before the mailing of	late of a first Office Action after the filing of request for			
continued examinati	on under § 1.114, no additional fee is required.			
In accordance with	§ 1.129(a), this Information Disclosure Statement is being			
filed in connection	with [ ] the first or [ ] second After Final Submission,			
therefore:				
☐ Certif	fication in Accordance with § 1.97(e) is attached; or			
The f	ee of \$180.00 as set forth in § 1.17(p) is attached.			
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1.97(e); and the sub	mission fee of \$180.00 as set forth in § 1.17(p).			
Copies of each of t	he references listed on the attached Form PTO-1449 are			
enclosed herewith.				

- Copies of references listed on the attached Form PTO-1449 are enclosed herewith
- Copies of references listed on the attached Form PTO 1449 are not required to be submitted pursuant to the June 30, 2003 recent revisions to 37 CFR § 1.98(a)(2)(i).

## **EXCEPT THAT:**

- In view of the voluminous nature of references 3, 23-25, and the likelihood that these references are available to the Examiner, copies are not enclosed herewith.
- In accordance with § 1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C.§ 120 have been made in the instant application:
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The relevance of those listed references which are not in the English language is as follows:

There are no listed references which are not in the English language.

Date: April 21, 2004

Jane E. Inglese

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EXAMINER			DATE CC	NSIDERED			
	12		wandt Chemie, Internatio	odified Oligonucleotides as Probes nal Edition Engl., 1991, 30, 613-629			
	11	Dagle, et al., "Physical properties of oligonucleotides containing phosphoramidate-modified internucleoside linkages", Nucleic Acids Research, 1991, 19, 1805-1810					
	10	Dagle, et al., "Pathways of Degradation and Mechanism of Action of Antisense Oligonucleotides in Xenopus laevis Embryos", Antisense Res. And Dev., 1991, 1, 11-20					
	9	directed by modified	d degradation of mRNA oligonucleotides: studies eic Acids Research, 1990,				
	8			erichia coli Rnase H1: cleavage of xes", Biochem. J., 1995, 312, 599-			
	7	Beaucage S. and Iyer, R., "Advances in the synthesis of oligonucleotides by the phosphoramidite approach", Tetrahedron Letters, 1992, 48, 2223-2311  Beaucage S. and Iyer, R., "The synthesis of modified oligonucleotides by the phosphoramidite approach and their applications", Tetrahedron, 1993, 49, 6123-6194  Bhat, et al., "A Simple and Convenient Method for the Selective N-Acylations of Cytosine Nucleosides", Nucleosides and Nucleotides, 1989, 8, 179-183  Crooke, S.T. and Bennett, C.F., "Progress in Antisense Oligonucleotide Therapeutics", Annu. Rev. Pharmacol. Toxicol., 1996, 36, 107-129					
	6						
	5						
	4						
	3	Ausubel, et al., Eds., C New York	Current Protocols in Molec	cular Biology, 1988, Wiley & Sons,			
O'	ГНЕ	R DOCUMENTS (Incl	uding Author, Title, Dat	e, Pertinent Pages, Etc.)			
			Confirmation No. 5964				
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	Filing Date November 4, 2003	Group 1645			
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OTHER DOCUMENTS (Including	ng Author, Title, Dat	e, Pertinent Pages, Etc.)			
		ligonucleotides complementary to redetermined length", Nucleic Acids			
Eder, P.S. and Walder, J.A., Cells", J. Biol. Chem., 1991,		K562 Human Erythroleukemia			
Oligonucleotides as Nuclea	Kawasaki, et al., "Uniformly Modified 2'-Deoxy-2'-fluoro Phosphorothioate Oligonucleotides as Nuclease-Resistant Antisense Compounds with High Affinity a Specificity for RNA Targets", J. Med. Chem., 1993, 36, 831-841				
	sis and Biophysical Studies of 2'-dRIBO-2'-F Modified Pharmaceuticals, Inc., 2280 Faraday Avenue, Carlsbad, CA 92008,				
Martin, "Ein neuer Zugan deren Oligonucleotide",	_	nucleosiden und Eigenschaften 5, 78, 486-504			
	e Inhibition of Mutant Ha-ras mRNA Expression by Antisense iol. Chem., 1992, 267, 19954-19962				
		leotides Containing 2'-Deoxy Gaps as Chem., 1993, 268, 14514-14522			
		Nitro-1,2,4-triazol-1-yl)-1-(β-D- Perkin Trans. I, 1982, pgs. 1171-1176			
Robins, et al., "Nucleic acid of 3',5'-O(1,1,3,3-tetraisoptevaluation of anomeric con	rpyldisilox-1,3-diyl)nuc	. Restricted furanose conformations leosides provide a convenient Chem., 1983, 61, 1911-1920			
	uce selective cleavage o	ense oligonucleotides directed against f the mRNA and inhibit T24 cells			
EXAMINER	DATE CO	NSIDERED			

Form	PTO-	-1449 Modified	Docket No. ISIS-5318	Application No. 10/700,939		
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			Confirmation No. 5964			
O	THE	R DOCUMENTS (Includ	ling Author, Title, Date	e, Pertinent Pages, Etc.)		
*	23					
*	24	Oligonucleotide Synthes	is, A Practical Approach	n, M.J. Gait, Ed., IRL Press, 1984		
*	25	Oligonucleotide and Analogs, A Practical Approach, F. Eckstein, Ed., IRL Press, 1991, Chapters 1-7				
	26	De Mesmeker, et al., "Antisense Oligonucleotides", Acc. Chem. Res., 1995, 28, 366-374				
	27		5'-Blocked Oligonucleo	of Internally <sup>3</sup> H-Labeled tides", Am. Soc. Pharmacol. Exp.		
	28			ainst the 3' Noncoding Region e Oocytes", Science, 1988, 241,		
	Goodchild, et al., "Conjugates of Oligonucleotides and Modified Oligonucleotides: A Review of their Synthesis and Properties", Bioconjugate Chem., 1990, 1(3), 165-187  Menelev, et al., "Study of antisense oligonucleotide phosphorothioates containing segments of oligodeoxynucleotides and 2'-methyloligoribonucleotides," Bioorg. & Med. Chem. Lett., 1994, 4(24), 2929-2934					
	31	Lengyel, J. Enzym. Res.,	<b>1987,</b> <i>7,</i> 511-519			
	32	Milligan, J. Med. Chem.	, <b>1993,</b> <i>36</i> , 1923			
EXAMINER			DATE CO	NSIDERED		

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EXAMINER		DATE CON	ISIDERED			
42	Blomberg, P., "Control of replication of plasmid R1: the duplex between the antisense RNA, CopA, and its target, CopT, is processed specifically in vivo and in vitro by Rnase III", EMBO J., 1990, 9, 2331-2340					
41	Blanks, et al., "An oligodeoxynucleotide affinity column for the isolation of sequence specific DNA binding proteins", Nucleic Acids Res., 1988, 16, 10283-10299					
40	Arndt-Jovin, et al., "Cov 1975, 54, 411-418	valent Attachment of DN	A to Agarose", Eur. J. Biochem.,			
39	Alberts, et al., "DNA-Ce 217	ellulose Chromatograph	y", Meth. Enzymol., <b>1971</b> , 21, 198-			
38	Nucleobase-Selective R	ationary Phases for Affi ecognition of Nucleoside ed Silica Gel <sup>1)</sup> ", Chem. Le	es and Nucleotides on Poly(9-			
37	Uhlmann, et al., "Antise Chem. Rev., 1990, 90, 54	_	New Therapeutic Principle",			
36	Stull, et al., "Antigene, Ribozyme and Aptamer Nucleic Acid Drugs: Progress and Prospects", Pharm. Res., 1995, Pharm. Rev., 12, 465-482					
35	Stein, C.A. et al., "Antisense Oligonucleotides as Therapeutic Agents - Is the Bullet Really Magical?", Science, 1993, 261, 1004-1012					
34	Westermann, et al., "Inh		SV40 virus large T-antigen by			
33		Oligonucleotide Techno Cancer Gene Therapeutic	ology in the Development of cs, 1994, 1, 65-71			
ОТНЕ	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			
		Confirmation No. 5964				
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<b>EXAMINER</b>	KAMINER			DATE CON	SIDERED	
· · · · · · · · · · · · · · · · · · ·		Dependent Site", Cell, 19 115-124	996, 85, 			
	52	Elela, et al., "RNase III C	Cleaves Eu	karyotic Prer	ibosomal RNA at a U3 snoRNP-	
	51	Bacteriophage T7 Messe	enger RNA	s", J. Mol. Bid	ol., <b>1975,</b> 99, 487-499	
	50	Duncan, et al., "Affinity Chromatography of a Sequence-Specific DNA Binding Protein Using Teflon-Linked Oligonucleotides", Anal. Biochem., 1988, 169, 104-108  Dunn, J.J. and Studier, F.W., "Effect of RNAase III Cleavage on Translation of				
	49	Drmanac, et al., "DNA Se Efficient Large-Scale Se			by Hybridization: A Strategy for 3, <i>260</i> , 1649-1652	
	48				n magnetic particles", Biochem.	
	47	Dake, et al., "Purification Mitochondria of Sacchar	_		Major Nuclease from 3iol. Chem., 1988, 263, 7691-7702	
	46	Crooke, et al., "Phmarma Analogs in mice", J. Phan		-	Several Novel Oligonucleotide 6, 277, 923-927	
	45	Chodosh, et al., "A Single Polypeptide Possesses the Binding and Transcription Activities of the Adenovirus Major Late Transcription Factor", Mol. Cell. Biol., 1986, 6, 4723-4733				
	44	Steric and kinetic parameters of heterogeneous hybridization reactions", Nucleic Acids Res., 1982, 10, 7181-7196				
	43	Bunemann, et al., Immob Efficiency of different co 7180	ollization o oupling pr	f denatured D ocedures", <i>Nu</i>	NA to macroporous supports: I. cleic Acids Res., 1982, 10, 7163-	
0		R DOCUMENTS (Includi		<u> </u>	<u> </u>	
			Confirmat 5964	ion No.		
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	Con 5964	firmation No.				
OTHER DOCUME	NTS (Including A	uthor, Title, Da	te, Pertinent Pages, Etc.)			
			ylamide-based oligonucleotide Nucl. Acids Res., 1993, 21, 1819-			
54 Fishel, et al. 328-342	, "Z-DNA Affinity	Affinity Chromatography", Methods Enzymol., 1990, 184,				
	Fodor, et al., "Light-Directed, Spatially Addressable Parallel Chemical Synthesis", Science, 1991, 251, 767-773					
		es from the extreme thermophilic archaebacterium S. chem., 1993, 16, 305-310				
new purifica		etic DNA affinity purification of yeast transcription factor τ-a le for the ultrarapid isolation of near homogeneous factor", 989, 17, 6253-6267 rucei: Calcium-Dependent Endoribonuclease is Associated with Parasitol., 1990, 71, 432-438				
	ultaneous Isolation oma Brucei", Mol. A		Endoribonuclease and Exoribonucease <i>l.</i> , 1985, <i>15</i> , 37-47			
Rnase III Cl	Gerdes, K., et al., "Mechanism of Killer Gene Activation. Antisense RNA-dependent Rnase III Cleavage Ensures Rapid Turn-over of the Stable-Hok, SrnB and PndA Effector Messenger RNAs", J. Mol. Biol., 1992, 226, 637-649					
61 Gingeras, et a Res., 1987, 1		properties of imm	nobilized nucleic acids", Nucl. Acids			
attachment	Goldkorn, T. And Prockop, D.J., "A simple and efficient enzymatic method for covalent attachment of DNA to cellulose. Application for hybridization-restriction analysis and for in vitro synthesis of DNA probes", Nucleic Acids Res., 1986, 14, 9171-9191					
EXAMINER		DATE CO	ONSIDERED			

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			Confirmation 5964	tion No.		
OT	HER	R DOCUMENTS (Includ	ling Author	r, Title, Date, 1	Pertinent Pages, Etc.)	
	63	Goss, T.A. and Bard, M. J. Chromatogr., 1990, 50			nity chromatography of DNA",	
	64	Guo, et al., "Direct fluorescence analysis of genetic polymorphisms by hybridization with oligonucleotide arrays on glass supports", Nucl. Acids Res., 1994, 22, 5456-5465				
	65	Kadonaga, J.T. and Tjian, R., "Affinity purification of sequence-specific DNA binding proteins", Proc. Natl. Acad. Sci. USA, 1986, 83, 5889-5893				
	66	Kadonaga, J.T., "Purific Affinity Chromatograp			ic Binding Proteins b DNA pgy, 1991, 208, 10-23	
	67		matograph		cription Factors IIIB and IIIC vidin-Biotin Interactions", Mol.	
	68	Kawaguchi, et al., "Purisselective adsorption of the 17, 6229-6240	fication of i	DNA-binding atex particles	transcription factors by their ", Nucleic Acids Research, 1989,	
	69	Kennedy, "Hydrophobic 339-343	c Chromate	ography", Meta	hods in Enzymology, 1990, 182,	
	70	Knecht, D., "Application of Antisense RNA to the Study of the Cytoskeleton: Background, Principles, and a Summary of Results Obtained with Myosin Heavy Chain", Cell Motil. and Cytoskel., 1989, 14, 92-102				
	Knochbin and Lawrence, "An antisense RNA involved in p53 mRNA maturation in murine erythroleukemia cells induced to differentiate", EMBO J., 1989, 8, 4107-4114				<b>-</b>	
	72				hybrolysis of λcII-O gene nes & Devel., 1990, 4, 2223-2233	
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ОТНЕ	R DOCUMENTS (Includ	ling Author	, Title, Date, 1	Pertinent Pages, Etc.)	
73	Krystal, et al., "N-myc n Antisense Transcripts"			NA Duplex with Endogenous 0, 10, 4180-4191	
74	Liao, "A pyrimidine-gu catesbeiana (bullfrog) o			ibonuclease from <i>Rana</i> 1992, <i>20</i> , 1371-1377	
75	Lohrmann, et al., "New S	Solid Supports for DNA Synthesis" DNA, 1984, 3, 122			
76	Lund, et al., "Assessment of methods for covalent binding of nucleic acids to magnetic beads, Dynabeads™, and the characteristics of the bound nucleic in hybridization reactions", Nucl. Acids Res., 1988, 16, 10861-10880				
77		ols permane		back regulated back-up of a <i>Dictyostelium</i> gene", <i>Nucl</i> .	
78	Matson, et al., "Biopolyn Biochem., 1994, 217, 30		sis on Polypro	opylene Supports", Anal.	
79					
80					
81	Narhi, et al., "Hydrophobic Interaction Chromatography in Alkaline pH", Anal Biochem., 1989, 182, 266-270				
82	Nellen, W., C., "What makes an mRNA anti-sense-itive?", Curr. Opin. Cell. Biol. 1993, 18, 419-424				
EXAMINER			DATE CON	SIDERED	

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			Confirmation No. 5964		
ro	THE	R DOCUMENTS (Includ	ling Author, Title, Da	te, Pertinent Pages, Etc.)	
	83		•	ation by endogenous and artificially Trans., 1992, 20, 750-754	
	84	Nitta, et al., "Purification and Some Properties of Ribonuclease from Xenopus laevis Eggs", Biol. Pharm. Bull. (Jpn.), 1993, 16, 353-356			
	85	Noguchi, et al., "Characterization of an Antisense Inr Element in the eIF-2a Gene", J. Biol. Chem., 1994, 269, 29161-29167			
	86	Noyes, et al., "Nucleic A Cellulose", Cell, 1975,	•	sing DNA Covalently Coupled to	
	87	Pease, et al., "Light-gen analysis", Proc. Natl. A	•	e arrays for rapid DNA sequence	
	88	Pon, et al., "Derivatizat Oligonucleotide Synthe		e Glass Beads for Solid Phase 5, 768-773	
	89			s of a Protein that Binds to the C-RNA", J. Biol. Chem., 1994, 269,	
	90	Saito, H. And Richardson, C., "Processing of mRNA by Ribonuclease III Regulates Expression of Gene 1.2 of Bacteriophage T7", 1981, Cell, 27, 533-542			
	91 Schott, "Template-Chromatographie An Stationar Gebundenen Oligonukleotiden", J. Chromatogr., 1975, 115, 461-476				
	92 Seliger, H., "Handelsubliche Polymere als Trager in der Oligonucleotidsynthese, 1", Die Makromolekulart Chemie, 1975, 176, 1611-1627				
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	nent of Commerce Frademark Office	Filing Date November 4, 2003	Group 1645			
		Confirmation No. 5964				
ОТНЕ	R DOCUMENTS (Incl	luding Author, Title, Dat	e, Pertinent Pages, Etc.)			
93		nylalkohol und <i>N</i> -Vinylp	leotidsynthese an unvernetzten yrrolidon", Die Makromolekulare			
94		Seliger, H. And Aumann, G., "Oligonucleotide Synthesis on a Polymer Support Soluble in Water and Pyridine", Tetrahedron Letters, 1973, No. 31, 2911-2914				
95	Siddell, S.G., "RNA Hybridization to DNA Coupled with Cyanogen-Bromide-Activated Sephadex", Eur. J. Biochem., 1978, 92, 621-629					
96	group at the 5' termi	Smith, et al., "The synthesis of oigonucleotides containing an aliphatic amino group at the 5' terminus: synthesis of fluorescent DNA primers for use in DNA sequence analysis", Nucl. Acids Res., 1985, 13, 2399-2412				
97			liates transcriptional procesing in of RNase activity", Mol. Microbiol.,			
98		- •	<b>chain reaction products by</b> <i>Res.,</i> <b>1988,</b> <i>16,</i> 11327-11338			
99	, , , , , , , , , , , , , , , , , , , ,	Regulation of Mouse DN Chem., 1991, 266, 10027-	A Methyltransferase Gene			
100	McBride, L.J. and Caruthers, M.H., "An Investigation of Several Deoxynucleoside Phosphoramidites Useful for Synthesizing Deoxyoligonucleotides", Tetrahedron Letters, 1983, 24, 245-248					
101	Van Ness, et al., "A versatile solid support system for oligodeoxynucleot probe-based hybridization assays", Nucleic Acids Research, 1991, 19, 33-					
102		Xenopus laevis bFGF gene coding , EMBO J., 1989, 8, 2983-2988				
EXAMINER		DATE CO	DNSIDERED			

Form PTO	0-1449 Modified	Docket No. ISIS-5318	Application No. 10/700,939			
Cited	nt and Publications by Applicant sheets if necessary)	Applicant David J. Ecker, et al				
	nent of Commerce Trademark Office	Filing Date November 4, 2003	Group 1645			
		Confirmation No. 5964				
OTHE	R DOCUMENTS (Inclu	ding Author, Title, Da	ate, Pertinent Pages, Etc.)			
103	Wetlaufer, et al., "Surf Chromatography", J.		ein Hydrophobic-Interaction 5, 359, 55-60			
104	Wu, et al., "Purificatio	Wu, et al., "Purification and Properties of <i>Drosophila</i> Heat Shock Activator Protein", Science, 1987, 238, 1247-1253				
105	wu, et al., "High Kesol	Wu, et al., "High Resolution Separation and Analysis of Biological Macromolecules", Methods in Enzymology, 1996, 270, 27-47				
106	r asnima, et al., "High-		chromatography of oligonucleotides gel columns", J. Chromatog., 1992,			
107	Yasuda, et al., "Purific spleen", Eur. J. Bioche		ation of a ribonuclease from human			
108	Zarytova, et al., "Affini Oligonucleotides", And		of DNA Fragments and P-Modified 88, 214-218			
109	Zuckermann, et al., "El		tachment of thiol specific probes to cotides", Nucleic Acids Research, 1987,			
110			Acids (PNA): Synthesis, Properties Med. Chem., 1996, 4, 5-23			
111	1		horothioate antisense kinase", Nature Medicine, 1996, 2,			
112	Ohtsuki, et al., "Isolatic calf thymus", J. Biol. (	<del>-</del>	double-stranded ribonuclease from 491			
EXAMINER		DATE C	CONSIDERED			

Form PTO-1449 Modified	Docket No. ISIS-5318	Application No. 10/700,939				
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)	Applicant David J. Ecker, et al.					
U.S. Department of Commerce Patent and Trademark Office	Filing Date November 4, 2003	Group 1645				
	Confirmation No. 5964					
OTHER DOCUMENTS (Include	ling Author, Title, D	ate, Pertinent Pages, Etc.)				
	Agrawal, S. et al., "Synthesis and Anti-HIV Activity of Oligoribonucleotides and Their Phosphorothioate Analogs," <i>Ann. N.Y. Acad. Sci.</i> , <b>1992</b> , 2-10					
114 Agrawal, S., "Antisense 1996, 14, 376-388	Agrawal, S., "Antisense Oligonucleotides: Towards Clinical Trials," <i>TIBTECH</i> , <b>1996</b> , <i>14</i> , 376-388					
Leukemia Virus by 2'-O	Arya, S. K. et al., "Inhibition of RNA Directed DNA Polymerase of Murine Leukemia Virus by 2'-O-Alkylated Polyadenylic Acids," <i>Biochemical and Biophysical Research Communications</i> , <b>1974</b> , <i>59(2)</i> , 608-615					
	tides and Their 2'-O-A	Murine Leukemia Virus in Cultured Alkyl Derivatives," Molecular				
117 Branch, A., "A Good An	tisense is Hard to Fin	d," <i>TIBS</i> , <b>1998</b> , <i>23</i> , 45-50				
		d 2'-substituted polyadenyl acids on Cancer Letters, 1979, 7, 27-37				
Hobbs, J. et al., "Polynuc 2'-deoxyribose <sup>†</sup> ," <i>Bioche</i>		2'-Amino 2'-deoxyribose and 2'-Azido-				
120 Hobbs, J. et al., "Poly 2'-	-Deoxy-2'-Aminourid	ylic Acid, <b>1972</b> , 46(4), 1509-1515				
	Pieken, W. et al., "Kinetic Characterization of Ribonuclease-Resistant 2'-Modified Hammerhead Ribozymes," <i>Science</i> , <b>1991</b> , <i>253</i> , 314-317					
EXAMINER	DATE (	CONSIDERED				

Form PTO-1449 Modified	Docket No. ISIS-5318	Application No. 10/700,939			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)	Applicant David J. Ecker, et al.				
U.S. Department of Commerce Patent and Trademark Office	Filing Date November 4, 2003	Group 1645			
	Confirmation No. 5964				
OTHER DOCUMENTS (Inc	luding Author, Title, Da	te, Pertinent Pages, Etc.)			
	Pilet, J. et al., "Structural parameters of single and double helical polyribonucleotides," <i>Biochem Biophys Res Commun</i> , <b>1973</b> , <i>52(2)</i> , 517-523				
1 1 1 1	Rottman, F. et al., "Polynucleotides Containing 2'- 0-Methyladenosine. I. Synthesis by Polynucleotide Phosphorylase," <i>Biochem</i> , <b>1968</b> , 7, 2634-2641				
	Rottman, F. et al., "Polymers Containing 2'-O-Methylnucleotides. II. Synthesis of Heteropolymers," <i>Biochem</i> , <b>1969</b> , <i>8</i> ( <i>11</i> ), 4354-4361				
		nnodeficiency virus (HIV-1) ," Nucl. Acids Res., 1989, 17(1), 239-			
127 Wincott et al., "Synth	esis, deprotection, analysids Res., 1995, 23(14), 26	is and purification of RNA and 677-2684			
128 Zmudzka, B. et al., "P polynucleotide structu	oly 2'-0-methylcytidylic are," Biochem Biophys Re	acid and the role of the 2'-hydroxyl in s Commun, 1969, 37(6), 895-901			
<b>2000</b> , 101, 235-238		te for gene silencing," Cell, April 28,			
interference in Droso	phila," Curr. Biol., 2001,				
Biophysica Acta, 2002	<b>2</b> , <i>1575</i> , 15-25	A interference," Biochimica et			
	RNAi in human cells: basi A," <i>Molecular Cell</i> , Septe	c structural and functional features of mber <b>2002</b> , <i>10</i> , 549-561			
EXAMINER	DATE C	ONSIDERED			

Form PTO-	Form PTO-1449 Modified  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Application No. 10/700,939	
Cited by					
	ent of Commerce rademark Office	Filing Date November		Group 1645	
		Confirmati 5964	on No.		
OTHER	DOCUMENTS (Includ	ing Author	Title, Date, I	Pertinent Pages, Etc.)	
133	133 Cogoni, C., et al., "Post-transcriptional gene silencing across kingdoms," Curr Opinion in Genes Dev., 2000, 10, 638-643				
	Elbashir, S.M., et al., "Fu	unctional and	atomy of siRN	As for mediating efficient RNAi 0 J., 2001, 29(23), 6877-6888	
135	Elbashir, S.M., et al., "RNA interference is mediated by 21- and -22-nucleotide RNA's," Genes & Dev., 2001, 15, 188-200				
	Elbashir, S.M., et al., "D in cultured mammalian c			RNAs mediate RNA interference 01, 411, 494-498	
137		nd specific g	enetic interfere	ence by double-stranded RNA in	
138	Guo, S., et al., "par-1, a	gene require tive Ser/Thr	d for establish	ing polarity in C. elegans asymmetrically distributed," Cell,	
			mes," Nature,	April 20, <b>2000</b> , <i>404</i> , 804-808	
	flowers: comparison of s DNA sequences," Plant	ense vs. anti Mol. Biol., 1	sense contruct <b>996</b> , <i>31</i> , 957-9		
	Lipardi, C., et al., "RNAi as random degradative PCR: siRNA primers convert mRNA into dsRNAs that are degraded to generate new siRNAs," <i>Cell</i> , November 2, <b>2001</b> , <i>107</i> , 297-307				
	Martinez, J., et al., "Sing RNAi," Cell, September			As guide target RNA cleavage in	
EXAMINER			DATE CONS	SIDERED	

Form PTO	-1449 Modified	Docket No ISIS-5318		Application No. 10/700,939		
Cited b	List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant David J. Ecker, et al.		
	nent of Commerce Frademark Office	Filing Dat November		Group 1645		
		Confirmat 5964	ion No.			
ОТНЕ	R DOCUMENTS (Includ	ing Author	r, Title, Date, I	Pertinent Pages, Etc.)		
143	Mellitzer, G., et al., "Spatial and temporal 'knock down' of gene expression by electroporation of double-stranded RNA and morpholinos into early postimplantati mouse embryos," <i>Mechanisms of Development</i> , <b>2002</b> , <i>118</i> , 57-63					
144						
145	Napoli, C., et al., "introduction of a chimeric chalcone synthase gene into petunia results in reversible co-suppression of homologous genes <i>in trans</i> ," <i>Plant Cell</i> , April <b>1990</b> , 2, 279-289					
146	Nishikura, K., "A short p key catalyst," Cell, Nove			ected RNA polymerase acts as a last		
147				trigger: differential requirement tolecular Cell, November 2000, 6,		
148				on as guides, not primers, in the ar Cell, September 2002, 10,		
149	Sijen, T., et al., "On the r silencing," Cell, Novemb			in dsRNA-triggered gene		
150		in C. elega		the genome sequence," Science,		
151	Tijsterman, M., et al., "R	NA helicas		endent gene silencing triggered in pary 25, <b>2002</b> , <i>295</i> , 694-697		
152	Timmons, L., et al., "Ing	C. elegans by short antisense RNAs," Science, January 25, 2002, 295, 694-697  Timmons, L., et al., "Ingestion of bacterially expressed dsRNAs can produce specific and potent genetic interferences in Caenorhabditis elegans," Gene, 2001, 263, 103-112				
EXAMINER			DATE CONS	SIDERED		

		···	1			
Form PTO-1449 Modified			Docket No ISIS-5318		Application No. 10/700,939	
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant David J. Ecker, et al.				
		ent of Commerce rademark Office	Filing Dat November		Group 1645	
			Confirmation 5964	ion No.		
OTI	HER	DOCUMENTS (Includ	ling Author	r, Title, Date, 1	Pertinent Pages, Etc.)	
1	153	Timmons, L., et al., "Spe 1998, 395, page 854	ecific interfe	erence by inges	sted dsRNA," Nature, October 29,	
1	154				double-stranded RNA in vitro,"	
1	155	Carmell, et al., Genes &	Develop., 2	<b>002</b> , <i>16</i> , 2733-	2742	
EXAMINER				DATE CON	SIDERED	

Form PTO-1449 Modified				Docket No. ISIS-5318	Applica 10/700	ation No. ,939	
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant David J. Ecker, et al.				
	U.S. Department of Commerce Patent and Trademark Office			Filing Date November 4, 2003	Group 1645		
				Confirmation No. 5964			
		U. S	S. PATENT	T DOCUMENTS			
Examiner Initial		Document No.	Date	Name		Class	Subclass
	156	3,687,808	8/29/72	Merigan, et. al.		195	28
	157	5,013,830	5/7/91	Ohtsuka, et al.		536	27
	158	5,023,243	6/11/91	Tullis		514	44
	159	5,142,047	8/25/92	Tullis		514	44
	160	5,149,797	9/22/92	Pederson, et al.		536	27
	161	5,177,198	1/5/93	Spielvogel, et al.		514	45
	162	5,130,302	7/14/92	Spielvogel, et al.		514	45
	163	5,223,618	6/29/93	Cook, et al.		544	276
	164	5,235,033	8/10/93	Summerton, et al.		528	391
	165	5,256,775	10/26/93	Froehler		536	25.6
	166	5,264,562	11/23/93	Matteucci		536	23.1
	167	5,264,564	11/23/93	Matteucci		536	23.1
	168	5,359,044	10/25/94	Cook, et al.		536	23.1
	169	5,366,878	11/22/94	Pederson, et al.		435	91.3
	170	5,378,825	1/3/95	Cook, et al.		536	25.34
	171	5,459,255	10/17/95	Cook, et al.		536	27.13
EXAMINE	R		·	DATE CONSIDER	RED		

				Docket No. ISIS-5318	Applica 10/700	ation No. ,939	
			Applicant David J. Ecker, et al.				
			Filing Date November 4, 2003				
				Confirmation No. 5964			
		U. S	S. PATENT	DOCUMENTS			
Examiner Initial		Document No.	Date	Name		Class	Subclass
	172	5,457,191	10/10/95	Cook, et al.		536	27.13
	173	5,466,786	11/14/95	Buhr, et al.		536	26.26
	174	5,476,925	12/19/95	Letsinger, et al.		536	23.1
	175	5,484,908	1/16/96	Froehler, et al.		536	24.31
	176	5,506,351	4/9/96	McGee		536	55.3
	177	5,514,786	5/7/96	Cook, et al.			
	178	5,386,023	1/31/95	Sanghvi, et al.		536	25.3
	179	5,489,677	2/6/96	Sanghvi, et al.		536	22.1
	180	5,539,083	7/23/96	Cook, et al.		530	333
	181	5,506,337	4/9/96	Summerton, et al.		528	391
	182	5,403,711	4/4/95	Walder, et al.		435	6
	183	5,508,270	4/16/96	Baxter, et al.		514	47
	184	4,373,071	2/8/83	Itakura		525	375
	185	4,401,796	8/30/83	Itakura		525	340
	186	4,469,863	9/4/84	Ts'o., et al.		536	27
	187	4,507,433	3/26/85	Miller, et al.		525	54.11
EXAMINE	R			DATE CONSIDER	RED		

Form PTO-1449 Modified				Docket No. ISIS-5318	Application No. 10/700,939		
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant David J. Ecker, et al.				
	U.S. Department of Commerce Patent and Trademark Office			Filing Date November 4, 2003	Group 1645		
				Confirmation No. 5964			
		U.	S. PATEN	T DOCUMENTS			
Examiner Initial		Document No.	Date	Name		Class	Subclass
	188	4,812,512	3/14/89	Buendia, et al.		525	54.11
	189	4,908,405	3/13/90	Bayer, et al.		525	61
	190	5,391,667	2/21/95	Dellinger		526	264
	191	5,519,134	5/21/96	Acevedo, et al.		544	243
	192	5,614,617	3/25/97	Cook, et al.		536	23.1
	193	5,962,425	10/05/99	Walder et al.		514	44
	194	5,804,683	09/08/98	Usman, et al.		536	25.31
	195	5,891,683	04/06/99	Usman, et al.		435	91.31
	196	5,804,683	09/08/98	Usman et al.		536	25.31
	197	5,891,683	04/06/99	Usman et al.		435	91.31
	198	5,214,134	05/25/93	Weis, et al.		536	25.3
	199	5,216,141	06/01/93	Benner		536	27.13
	200	5,223,618	06/29/93	Cook, et al.		544	276
	201	5,264,562	11/23/93	Matteucci		536	23.1
1.76	202	5,264,564	11/23/93	Matteucci		536	23.1
	203	5,434,257	07/18/95	Matteucci, et al.		536	24.3
EXAMINE	R			DATE CONSIDERED			

I TOTAL TO THE PROPERTY OF THE				Docket No. ISIS-5318	Application No. 10/700,939		
			Applicant David J. Ecker, et al.				
			Filing Date November 4, 2003				
				Confirmation No. 5964			
		U. S	S. PATENT	DOCUMENTS	<u> </u>		
Examiner Initial		Document	Data	Name		Class	Carbalana
IIIIII	204	<b>No.</b> 5,470,967	<b>Date</b> 11/28/95	Name Huie, et al.		Class 536	Subclass 24.3
	205	5,489,677	02/06/96	Sanghvi, et al.		536	22.1
	206	5,541,307	07/30/96	Cook, et al.		536	23.1
	207	5,561,225	10/01/96	Maddry, et al.		536	23.1
******	208	5,596,086	01/21/97	Matteucci, et al.		536	22.1
	209	5,602,240	02/11/97	De Mesmaeker, et a	l,	536	22.1
	210	5,610,289	03/11/97	Cook, et al.		536	25.34
	211	5,618,704	04/08/97	Sanghvi, et al.		435	91.5
	212	5,663,312	09/02/97	Chaturvedula		536	22.1
	213	5,677,437	10/14/97	Teng, et al.		536	23.1
	214	5,677,439	10/14/97	Weis, et al.		536	23.1
	215	5,777,092	07/0798	Cook, et al.		536	23.1
	216	5,780,607	07/14/98	Goodnow, Jr., et al.		536	22.1
	217	5,792,608	08/11/98	Swaminathan, et al.		435	6
	218	5,792,844	08/11/98	Sanghvi, et al.		536	23.1
	<b>219</b> 5,808,023 09/15/98			Sanghvi, et al.		536	23.1
	220	5,817,781	10/06/98	Swaminathan, et al.		536	22.1
EXAMINER	<u> </u>			DATE CONSIDERED			

Form PTO-1449 Modified				Docket No. Application No. ISIS-5318 10/700,939			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant David J. Ecker, et al.				
		rtment of Commerce d Trademark Office	;	Filing Date November 4, 2003	Group 1645		
				Confirmation No. 5964			
		U. S	S. PATENT	DOCUMENTS			-
Examiner Initial		Document No.	Date	Name		Class	Subclass
	221	5,898,031	04/27/99	Crooke	-	435	172.3
	222	5,965,721	10/12/99	Cook, et al.		536	23.1
	223	5,969,118	10/19/99	Sanghvi, et al.		536	22.1
	224	6,013,785	01/11/00	Bruice, et al.		536	24.5
	225	6,107,094	08/22/00	Crooke		435	455
	226	6,331,617 B1	12/18/01	Weeks, et al.		536	24.5
	227	6,410,702 B1	06/25/02	Swaminathan, et al.		536	23.1
	228	6,420,549 B1	07/16/02	Cook, et al.		536	24.2
	229	4,321,365	03/23/82	Wu, et al.		536	27
	230	4,362,867	12/07/82	Paddock		536	27
	231	4,775,619	10/04/88	Urdea		435	6
	232	4,855,225	08/08/89	Fung, et al.		435	6
	233	4,997,828	03/05/91	Kappas, et al.		514	184
	234	5,151,507	09/29/92	Hobbs, Jr., et al.		536	23
EXAMINER	2			DATE CONSIDER	RED		

Form PTO-1449 Modified  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office				Docket No. ISIS-5318	Application No. 10/700,939		
				Applicant David J. Ecker, et al.			
				Filing Date November 4, 2003	Group 2003 1645		
				Confirmation No. 5964			
		· <b>U.</b> :	S. PATENT	T DOCUMENTS			<del>-</del>
Examiner Initial		Document No.	Date	Name		Class	Subclass
	235	5,188,934	02/23/93	Menchen, et al.	•	435	6
	236	5,208,149	05/04/93	Inouye	-	435	91
	237	5,380,833	01/10/95	Urdea		536	22.1
	238	5,424,413	06/13/95	Hogan, et al.		536	24.31
	239	5,426,180	06/20/95	Kool	, , , , , , , , , , , , , , , , , , , ,	536	25.3
	240	5,473,060	12/05/95	Gryaznov, et al.		536	24.3
-	241	5,484,904	01/16/96	Nilsen, et al.	.,_	536	23.1
	242	5,512,438	04/30/96	Ecker		435	6
	243	5,514,546	05/07/96	Kool		435	6
	244	5,516,641	05/14/96	Ullman, et al.		435	6
	245	5,538,872	07/23/96	Bahl, et al.		435	91.52
	246	5,543,507	08/06/96	Cook, et al.		536	23.1
	247	5,556,752	09/17/96	Lockhart, et al.		435	6
	248	5,561,043	10/01/96	Cantor, et al.		435	6
	249	5,571,903	11/05/96	Gryaznov		536	23.1
	250	5,624,802	04/29/97	Urdea, et al.		435	6
	251	5,683,874	11/04/97	Kool		435	6
	252	5,708,154	01/13/98	Smith, et al.		536	23.1
EXAMINER				DATE CONSIDER	RED		

#### Docket No. Application No. Form PTO-1449 Modified ISIS-5318 10/700,939 List of Patent and Publications **Applicant** Cited by Applicant David J. Ecker, et al. (Use several sheets if necessary) U.S. Department of Commerce Filing Date Group Patent and Trademark Office November 4, 2003 1645 Confirmation No. 5964 **U. S. PATENT DOCUMENTS** Examiner Document Initial Date No. Name Class Subclass 253 5,712,128 01/27/98 Been, et al. 435 91.31 254 5,760,012 06/02/98 Kmiec, et al. 514 44 255 5,766,903 06/16/98 435 172.3 Sarnow, et al. 256 5,919,917 07/06/99 Shiono, et al. 536 23.1 257 6,072,044 06/06/00 Seeman, et al. 536 22.1 258 6,180,777 B1 01/30/01 536 25.3 Horn 259 6,274,723 B1 08/14/01 Nilsen 536 24.3 **EXAMINER**

**DATE CONSIDERED** 

#### Application No. Docket No. Form PTO-1449 Modified 10/700,939 ISIS-5318 List of Patent and Publications Applicant Cited by Applicant David J. Ecker, et al. (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office Filing Date Group November 4, 2003 1645 Confirmation No.

# **FOREIGN PATENT DOCUMENTS**

5964

Examiner			Date	Country	Translation	
Initial		Document No.			YES	NO
	260	WO 92/22651	12/23/92	PCT		
	261	WO 92/20822	11/26/92	PCT		
	262	WO 92/20823	11/26/92	PCT		
	263	WO 94/17093	08/04/94	PCT		
	264	WO 94/02499	02/03/94	PCT		
	265	WO 94/02501	03/02/94	PCT		
	266	339,842	02/11/89	EPO		
	267	2-264792	29/10/90	Japan		
	268	WO/07065	04/30/92	PCT		
	269	WO 99/32619	07/01/99	PCT		
	270	WO 00/44895	08/03/00	PCT	X abstract	
	271	WO 00/44914	08/03/00	PCT		
	272	WO 00/49035	08/24/00	PCT		
EXAMINER				DATE CONSIDERED		

# Application No. Docket No. Form PTO-1449 Modified ISIS-5318 10/700,939 List of Patent and Publications **Applicant** Cited by Applicant David J. Ecker, et al. (Use several sheets if necessary) U.S. Department of Commerce Filing Date Group Patent and Trademark Office November 4, 2003 1645 Confirmation No. 5964 FOREIGN PATENT DOCUMENTS Examiner **Translation** Date Initial Document No. Country YES NO 273 WO 00/63364 10/26/00 **PCT** 274 WO 01/29058 04/26/01 **PCT** 275 WO 01/36641 A2 05/25/01 PCT 276 WO 01/36646 A1 05/25/01 PCT WO 01/48183 A2 07/05/01 277 **PCT** WO 01/75164 A3 278 10/11/01 **PCT EXAMINER DATE CONSIDERED**